

CHUNIN, A.A. (Novgorod); VOLKOV, V.P. (Novgorod)

Models of automatic devices for program control. Fiz. v shkole
20 no.6:62-65 N-D '60. (MIRA 14:2)
(Automatic control)

VOLKOV, V. P.

8
 Lubricant for dies. V. K. Bichanikov, V. P. Volkov,
 L. V. Lania, V. D. Utkin, N. E. Kutunov, G. A. Kytmanov,
 and L. D. Pavlovskaya. U.S.S.R. 164,810, Feb. 25, 1957.
 A mixt. of 25-30% Al stearate and 70-5% aviation oil is
 used to lubricate molding dies for org. glass substitutes.
 It prevents marling of the molded articles, reduces internal
 strains, and permits replacement of channels with textiles
 for covering the dies.
 M. Hosh.

gmb any

137-58-4-6980

Volkov, V. P.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 95 (USSR)

AUTHORS: Mitrenin, B. P., Burdiashvili, Sh. S., Shamba, N. A., Volkov, V. P., Kovyrzin, V. K., Solov'yev, L. K.

TITLE: Obtaining Single Crystals of Silicon by Extraction From a Melt
(Polucheniye monokristallov kremniya metodom vytyagivaniya iz rasplava)

PERIODICAL: V sb.: Vopr. metallurgii i fiz. poluprovodnikov. AN SSSR, 1957, pp 24-34

ABSTRACT: The possibility of obtaining large single crystals with a specified orientation from material purified by acid washing or obtained by reduction of SiCl_4 by zinc, and the distribution of certain impurities in the extracted bar was investigated by the use of tagged atoms. The apparatus built employed high frequency heating of a base in which there was emplaced a quartz crucible containing the Si, or by means of a graphite resistance heater in the center of which, and on a quartz base, there was placed a graphite holder with the quartz crucible having the Si. A vacuum of 10^{-4} mm Hg was maintained in the apparatus. The crucible was free to rotate at a speed of 1 rpm, and the seed in a direc-

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137-58-4-6980

Obtaining Single Crystals of Silicon by Extraction From a Melt

tion opposite to that of the rotation of the crucible at a rate of 2 rpm. The rate of extraction was 0.5-1 mm/min. It was established that when a slag film existed at the surface of the melt it was not possible to obtain any single crystals, as a number of small crystals appeared at points of accumulation of slag and at the point of inoculation. Repeated extractions after careful etching, and upon removal of visible slag inclusions on the surface of the bar by emery and cutting away of its ends, made it possible to obtain single crystals of 15-20 mm diameter and lengths up to 240 mm. Before pulling the crystal, the melt was held for 15-20 min at the pulling temperature in order for equilibrium to be established. The opinion is offered that the polycrystallinity of a drawn bar is also due to the formation of a film of SiO_2 when the vacuum is reduced below 10^{-4} mm Hg, additional centers of crystallization being set up thereby. One of the possible causes of further increase in vacuum is the reaction of quartz and graphite, and therefore the crucibles in the apparatus employed were placed so that they would touch the bases only at three points. It was observed that vibration of the apparatus facilitated twinning in the single crystal being grown. Radioactive isotopes made it possible to determine that Sb and Ag (respectively 1.5 and 6.1 mg per 40 g Si) were completely distilled from the melt and were not to be found in the crystal. Ta (12.5 mg per 40 g Si) remained in its entirety in the zone, and was the last to solidify, while Fe

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Obtaining Single Crystals of Silicon by Extraction From a Melt

(46.6 mg per 40 g Si) undergoes virtually uniform distribution through the bar in the process of extraction, the bulk of it remaining in the melt.

1. Single crystals--Production
2. Silicon tetrachloride--Reduction
3. Zinc--Applications

I. S.

Card 3/3

L 00838-67 EWT(m)/EWP(j) RM

ACC NR: AP6027780 (A) SOURCE CODE: UR/0190/66/008/008/1459/1461

AUTHOR: Volkov, V. P.; Ivanov, V. N. 24B

ORG: Branch, Institute of Chemical Physics, AN SSSR (Filial instituta khimicheskoy fiziki AN SSSR)

TITLE: Synthesis of dimethyl ethers of polyoxymethyleneglycoles 7

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 8, 1966, 1459-1461

TOPIC TAGS: dimethyl ether, formaldehyde, methanol, paraform, acetal, cation, ion exchange resin

ABSTRACT: A method was described for obtaining methylal from methanol and paraform in the presence of a cation-exchange resin. The procedure was developed for preparing oligoformals of the general formula $\text{CH}_3\text{O}(\text{CH}_2\text{O})_n\text{CH}_3$, where $n = 2-3$, by a methylal reaction with a paraform in the presence of H_2SO_4 . The method of quantitative analysis of oligoformal acetals was developed. [Based on authors' abstract] [NT]

SUB CODE: 07/ SUBM DATE: 12Jul65/ OTH REF: 010/

Card 1/1 hs

UDC: 541.64+678.55

IVANOV, V.V.; SHAGINYAN, A.A.; VOLKOV, V.P.; YENIKOLOPYAN, N.S.

Effect of chain transfer reaction with termination on the
molecular weight distribution of polymers and oligomers.
Vysokom.sped. 7 no.10:1830-1834 0 '65.

(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR.

KONDRA'YEV, V.M., dotsent, kand. tekhn. nauk; VOLEOV, V.P., student

Experimental studies of the distribution of the load of full-length
log bundles among strap containers. Trudy STI 37:130-134 '64.

(MIRA 18:5)

ORLOV, A.P., kand.tekhn.nauk; VOLKOV, V.P., inzh.

New norms of specific resistances for the design and construction
of classification humps. Zhel.dor.transp. 45 no.6:50-52 Je '64.
(MIRA 18:1)

VOLKOV, V.P.

Effect of slit furrowing on the water absorption by frozen
soil. Pochvovedenie no.8:94-100 Ag '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki
i melioratsii imeni A.N.Kostyakova.

VOLKOV, V. P.

Dissertation defended for the degree of Candidate of Chemical Sciences
at the Institute of Organic Chemistry imeni N. D. Zelinskly in 1962:

"Reactions of 2, 5-(chloromethyl)-furnace and Furnace-2, 5-dialdehyde."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

YUR'YEV, Yu.K.; LUKINA, Ye.M.; POLIKABPOV, Yu.M.; ~~VOLKOV, V.P.~~

Catalytic conversions of heterocyclic compounds. Part 48. Preparation of 3-isoamyl-, 3-hexyl-, and 3-~~p~~-tolyltetrahydrothiophenes from corresponding furanidines. Zhur.ob.khim. 26 no.2: 553-557 P '56. (MLRA 9:8)

1. Moskovskiy gosudarstvennyy universitet.
(Thiophene) (Furan)

YUR'YEV, Yu.K.; BELYAKOVA, Z.V.; VOLKOV, V.P.

Tetraacyloxy silanes in organic synthesis. Part 17: Acylation of benzene by silicon anhydrides of acetic acid, mono, di and tri-chloroacetic and β -bromopropionic acids. Zhur.ob.khim. 28 no.9: 2372-2376 S '58. (MIRA 11:11)

1. Moskovskiy gosudarstvennyy universitet.
(Benzene) (Acylation)

5(3)

AUTHORS:

Yur'yev, Yu. K., Belyakova, Z. V., Volkov, V. P. SOV/79-29-5-12/75

TITLE:

Tetraacyl-oxy-silanes in Organic Synthesis (Tetraatsiloksisilany v organicheskom sinteze).

21. Preparation of Acyl-oxy-trichloro Silanes From Acids of Aromatic Nature (21. Polucheniye atsiloksitrikhlorsilanov iz kislot aromaticheskoy prirody)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1463-1470 (USSR)

ABSTRACT:

It was found in the present paper that the homologues of benzoic acid (o- and p-toluic acid), α -naphthoic acid, substituted benzoic acids (o- and p-chloro benzoic-, o-, m- and p-nitro-benzoic acid) as well as α -furan carboxylic and α -thiophene carboxylic acid yield the corresponding acyl-oxy-trichloro silanes under the influence of excess silicon tetrachloride. On longer standing they disproportionate to give tetraacyl-oxy-silanes and silicon tetrachloride. The tendency towards disproportionation rises with an increased strength of the organic acid contained in the acyl-oxy-trichloro silanes (Table 1). On dilution with inert solvents (benzene, ether) acyl-oxy-trichloro silanes can be preserved for some time. Temperature increase accelerates the disproportionation and thus causes a partial decomposition during their distillation in vacuum. The

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Tetraacyl-oxy-silanes in Organic Synthesis.

SOV/79-29-5-12/75

21. Preparation of Acyl-oxy-trichloro Silanes From Acids of Aromatic Nature

solubility of the acids in silicon tetrachloride plays an important part in the synthesis. Under the experimental conditions silicon tetrachloride did not react with ether or acetone. The use of the latter to attain a better solubility of the acids accelerates, however, the formation of acyl-oxy-trichloro silanes. The formation mechanism of acyl-oxy-trichloro silanes was investigated on the example of the interaction of silicon tetrachloride with o-chloro benzoic- and benzoic acid. By the influence of excess silicon tetrachloride upon the organic acid acyl-oxy-trichloro silane is formed without any intermediate products. When studying the properties of the acyl-oxy-trichloro silanes the cleavage reaction under various conditions was investigated with special thoroughness. It was found on benzoyl-trichloro silane that its cleavage is especially considerable during distillation under atmospheric pressure, in which connection benzoyl chloride, silicon dioxide and silicon tetrachloride are formed (Ref 1). On the basis of experimental data the following scheme of the thermal decomposition of benzoyl trichloro silane can be established:

- 1) Benzoyl-oxy-trichloro silane is disproportionated in vacuum and on standing to give silicic acid and silicon tetrachloride.
- 2) The

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Tetraacyl-oxy-silanes in Organic Synthesis.

SOV/79-29-5-12/75

21. Preparation of Acyl-oxy-trichloro Silanes From Acids of Aromatic Nature

benzoic acid silicide is further cleaved to form benzoic anhydride and silicon dioxide. 3) The formed benzoic anhydride yields under the influence of silicon tetrachloride on one hand and of benzoyl-trichloro silane on the other hand benzoyl chloride and silicon dioxide. Table 1 - the rate of the disproportionation of acyl-trichloro silanes; table 2 - acyl-oxy-trichloro silanes; table 3 - disproportionation products of the acyl-oxy-trichloro silanes; table 4 - tetra-acyl-oxy-silanes. There are 4 tables and 8 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: May 19, 1958

Card 3/3

YUR'YEV, Yu.K.; BELYAKOVA, Z.V.; VOLKOV, V.P.; OSADCHAYA, R.A.;
SHAYDEROVA, L.P.

Tetraacyloxysilanes in organic synthesis. Part 28: Acylation of
benzene by silicon- β -chloropropionic and γ -chlorobutyric anhydrides.
Part 29: Preparation of organic acid anhydrides from their silicon
anhydrides. Vest.Mosk.un.Ser. 2: Khim. 15 no.1:61-67 '60.

(MIRA 13:7)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Silicon organic compounds)
(Anhydrides)
(Acylation)

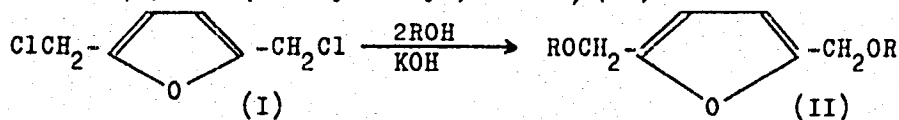
S/079/60/030/007/027/039/XX
B001/B066

AUTHORS: Novitskiy, K. Yu., Volkov, V. P., Kostetskiy, P. V.,
and Yur'yev, Yu. K.

TITLE: Investigation in the Furan Series. VII. 2,5-Bis(chloro-
methyl)-furan in the Synthesis of 2,5-Bis(alkoxy-methyl)-
and 2,5-Bis(alkyl-mercapto-methyl)-furan

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2203-2207

TEXT: Following Ref. 1 the authors synthesized 2,5-bis(alkoxy-methyl)-
and 2,5-bis(alkyl-mercapto-methyl)-furan by treating 2,5-bis(chloro-methyl)-
furan with alcohols and mercaptans. The substitution of alkoxy groups for
two chlorine atoms in compound (I) takes readily place under the action of
alcohols in the presence of alkali lye; the yield of the corresponding
ethers (2,5-bis(alkoxy-methyl)-furans) (II) was between 60 and 70%. ✓



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Investigation in the Furan Series. VII. S/079/60/030/007/027/039/XX
 2,5-Bis(chloro-methyl)-furan in the Synthesis B001/B066
 of 2,5-Bis(alkoxy-methyl)- and 2,5-Bis(alkyl-
 mercapto-methyl)-furan

($R = CH_3, C_2H_5, n - C_4H_9, n - C_5H_{11}$). When using the corresponding alcohols instead of alcohols, the ether yield increases to 74-82%. 2,5-bis(methoxy-methyl)-furan was also obtained by methylation of 2,5-bis(hydroxy-methyl)-furan. The latter was synthesized from the acetoxy derivative. The reaction of thiourea with 2,5-bis(chloro-methyl)-furan, followed by cleavage of the resultant bis-isothiuronium salt gave 2,5-bis(mercapto-methyl)-furan (III). The high mobility of chlorine in 2,5-bis(chloro-methyl)-furan is seen in its reaction with sodium mercaptides. The corresponding furan derivatives (IV) were obtained in yields of between 72 and 89%; the yield of 2,5-bis(phenyl-mercapto-methyl)-furan was 60%. The two first-mentioned representatives of the resultant bis-sulfides ($R = C_3H_7, iso-C_4H_9$) form crystalline complexes with $HgCl_2$, while the latter form oils. There are 1 table and 5 references: 2 Soviet, 1 Dutch, 1 British, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
 (Moscow State University)

SUBMITTED: July 15, 1959
 Card 2/2

VOLKOV, V. P., Cand. Chem. Sci. (diss) "Reactions of 2.5-BIS
(Methyl Chloride)- Furan and Furan-2.5 Dialdehyde[?]." Mos-
cow, 1961, 13 pp. (Acad. of Sci. USSR, Inst. of Organic Chem.)
150 copies (KL Supp 12-61, 255).

88481

S/079/61/031/001/013/025
B001/B066

15.8111

2209

AUTHORS: Novitskiy, K. Yu., Volkov, V. P., Shayderova, L. P., and Yur'yev, Yu. K.

TITLE: Studies in the Furan Series. XI. 2,5-Bis-(chloro-methyl)-furan in the Synthesis of Symmetric 2,5-Dialkyl Furans

PERIODICAL: Zhurnal obshchey khimii, 1961, Vol. 31, No. 1, pp. 136 - 139

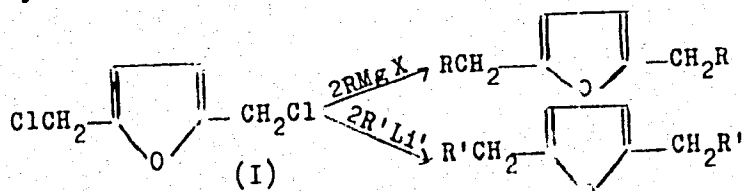
TEXT: The authors synthesized the symmetric 2,5-dialkyl furans by the reaction of 2,5-bis-(chloro-methyl)-furan with organomagnesium compounds, in yields of 33 - 56 %. They found the yield to be highly dependent on the length of the carbon chain and on the nature of the halogen of the alkyl magnesium halide. The maximum yields of dialkyl furans were obtained with alkyl magnesium chlorides (46 % with propyl magnesium chloride, and 38 % with butyl magnesium chloride); when using alkyl magnesium bromides, the yield drops to 37 % with propyl magnesium bromide, and to 29 % with butyl magnesium bromide; when using methyl magnesium iodide, the yield is only 5 %.

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S/079/61/031/001/013/025
BC01/B066

Studies in the Furan Series. XI. 2,5-Bis-(chloro-methyl)-furan in the Synthesis of Symmetric 2,5-Dialkyl Furans



R = CH₃, C₂H₅, n-C₃H₇, n-C₄H₉, iso-C₄H₉; R' = C₂H₅, n-C₃H₇, n-C₄H₉.

Attempts with Grignard reagents from n-octyl bromide, bromo benzene, benzyl chloride, cyclopentyl- and cyclohexyl chloride were unsuccessful. 5 % diphenyl and symmetric diphenyl ethane (18 %) were separated with phenyl magnesium bromide and benzyl magnesium chloride respectively. In the reaction of methyl magnesium halides with furfuryl chloride (Ref. 7) a polycondensation mainly occurs, which yields the polymers presented in Scheme 2. The yields of the corresponding dialkyl furans in the reaction of 2,5-bis-(chloro-methyl)-furan with lithium alkyls were 19 - 25 %. There are 9 references: 4 Soviet, 1 French, 1 Canadian, 1 British, and 3 US.

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Studies in the Furan Series. XI. 2,5-Bis-
(chloro-methyl)-furan in the Synthesis of
Symmetric 2,5-Dialkyl Furans

88481

S/079/61/031/001/013/025
B001/B066

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State
University)

SUBMITTED: February 22, 1960

Card 3/3

NOVITSKIY, K.Yu.; VOLKOV, V.P.; YUR'YEV, Yu.K.

Furan series. Part 12: Furan-2,5-dialdehyde and its reactions
with malonic acid derivatives. Zhur. ob. khim. 31 no. 2:538-
541 F '61. (MIRA 14:2)

1. Moskovskiy gosudarstvennyy universitet.
(Furandicarboxaldehyde)

VOLKOV, V.P.; POLYAKOV, A.I.; KARAKHANNOVA, M.I.; VORONINA, L.P.

Petrochemical characteristics and associations of nepheline syenite accessory minerals of the differentiated complex of the Lovozero alkaline massif. Geokhimiya no.8:656-665 '61. (MIRA 17:3)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR, Moskva.

VAYNER, A.L., kand. tekhn. nauk; VOLKOV, V.P., inzh.; TUCHIN, V.I., inzh.

Grounding of electric current in reinforced concrete
towers. Elek. sta. 35 no.2:61-66 F '64. (MIRA 17:6)

VOLKOV, Vladimir Pavlovich

Tuneli. Preveo sa ruskog Vitomir M. Joksic.

Tunnels; textbooks for schools of railroad engineering, Beograd, Izdavacko
stamparsko preduzece Saveta za energetiku i edstraktivnu industriju Vlade
FNRJ, 1951- (55-17034)

TF230.V618

VOLKOV, V.P., dotsent :

Content of some metabolites in the blood and urine of healthy persons and dermatosis patients. Vest. dermat. i ven. 37 no. 10: 15-20 0 '63. (MIRA 17:9)

1. Kozhno-venerologicheskoye dispansernoye otdeleniya (zav. - dotsent V.P.Volkov) Moskovskoy gorodskoy klinicheskoy bol'nitsy No. 23 (glavnyy vrach A.N.Lobanova).

VOLKOV, V.P., dotsent

Free amino acids in the blood and urine of patients with some forms of dermatosis. Vest. dermat. i ven. 38 no.1:9-18 Ja '64. (MIRA 17:8)

1. Kozhno-venerologicheskoye dispansernoye otdeleniye (zav. - dotsent V.P. Volkov) Moskovskoy gorodskoy klinicheskoy bol'nitsy No.23 imeni Medsantrud (glavnyy vrach A.N. Lobanova).

ACCESSION NR: AT4014068

S/3072/63/000/000/0160/0167

AUTHOR: Sokolov, Yu. A.; Volkov, V. P.; Veyler, S. Ya.

TITLE: The influence of lubricants on the wear resistance of the diamond dies used during the drawing of molybdenum wire

SOURCE: Fiz.-khim. zakonmernosti deystviya smazok pri obrabotke metallov davleniyem. Moscow, Izd-vo AN SSSR. 1963, 160-167

TOPIC TAGS: lubricant, wear resistance, die diamond, die, wire drawing, molybdenum, molybdenum wire

ABSTRACT: The authors studied the influence of different lubricants such as sulfofrezol, graphite, paraffin, cetyl alcohol, lanolin, stearic acid, oleic acid, boric nitride and others on the durability of the diamond die during cold drawing of molybdenum wire. The wear to the diamond die is many times greater when the metal is not heated. Sulfofrezol appeared to be the best lubricant for cold drawing. However, even when it was applied, the wear to the die was still seven times greater than when drawing was performed after heating the metal and applying as a lubricant, a colloidal aqueous solution of graphite. It has also been suggested that molybdenum wire be drawn after covering its

Card 1/2

ACCESSION NR: AT4014068

surface with a plastic film of metal for example, copper. It was found that the wear to the diamond die during cold drawing results not only from the hardness of the metal but also from the adhesive interaction of the metal and diamond surfaces. With a proper selection of lubricant, however, cold drawing may replace hot drawing in industrial practice. Orig. art. has: 5 figures and 7 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 19Dec63

ENCL: 00

SUB CODE: MM, cMT

NO REF SOV: 002

OTHER: 001

Card 2/2

ABDULLAYEV, A.A.; VOLKOV, V.P.; GEYNTS, V.A.; ZAKHIDOV, A.Sh.; KHAITOV, B.K.

Use of tritium in hydrogeological studies. Izv. AN Uz. SSR.
Ser. fiz.-mat. nauk 6 no.5:45-49 '62. (MIRA 15:11)

1. Institut yadernoy fiziki AN UzSSR.
(Tritium) (Geophysics)

NOVITSKIY, K.Yu.; VOLKOV, V.P.; YUR'YEV, Yu.K.

Furan series. Part 20: Reactions of condensation, oxidation,
and reduction of furan-2,5-dialdehyde. Zhur.ob.khim. 32 no.2:
399-402 F '62. (MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Furan)

VOLKOV, V. P., dotsent

Some physiological interrelations of vitamin A and neutral 17-ketosteroids in patients with various dermatoses. Vest. dermat. i ven. no.10:9-14 '61. (MIRA 14:12)

1. Iz kozhno-venerologicheskogo dispansernogo otdeleniya (zav. - dotsent V. P. Volkov) Moskovskoy gorodskoy klinicheskoy bol'nitsy No. 23 imeni Medrantrud (glavnyy vrach A. N. Lobanova)

(SKIN—DISEASES) (VITAMINS—A) (STEROIDS)

NOVITSKIY, K.Yu.; VOLKOV, V.P.; SHAYDEROVA, L.P.; YUR'YEV, Yu.K.

Furan series. Part 18: 2, 5-Bis(N-alkylazomethine)- and
2, 5-bis(N-arylazomethine)-furans. Zhur.ob.khim. 31 no.10:
3277-3281 0 '61. (MIRA 14:10)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Furan)

VOLKOV, V.P.; SAVINOVA, Ye.N.

Relationship between potassium and rubidium in the evolution
process of lime-alkaline and alkaline igneous magmas. *Geokhimiya*
no.12:1099-1107 '61. (MIRA 15:3)

1. Vernadskiy Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences U.S.S.R., Moscow.
(Lovozero Tundras--Potassium) (Lovozero Tundras--Rubidium)

Volkov, Vladimir Pavlovich

N/5
661.6
.V9

Tonneli Na Avtomobil'nykh Dorogakh (Tunnels on Motor Vehicle Highways)
Moskva, Avtotransizdat, 1957.

381 P. Illus., Diagr., Tables.

"Literatura": P. 378.

STYRIKOV, D.S.; VOLKOV, V.P.

Pulse transmitter and its use in the alignment of clocks.
Avtom., telem. i svyaz' 9 no.11:35-37 N '65.

(MIRA 18:12)

1. Starshiye elektromekhaniki Luganskogo telefonnogo uzla
svyazi promyshlennykh predpriyatiy Donetskogo soveta narodnogo
khozyaystva.

CA
VOLKOV, V.S.

6

Compounds of rhodium with thiourea. V. V. Lebedev, *skil* and V. S. Volkov, *skil*, *skil* (U. S. S. R.) No. 12, 70-80 (1955).--A soln. of $\text{Na}_3\text{RhCl}_6 \cdot 12\text{H}_2\text{O}$ (I) reacts with a 10% excess over the theoretical amt. of $\text{SC}(\text{NH}_2)_2$ (II), when it is warmed, to give $\text{Rh}(\text{SCN}_2\text{H}_4)_3\text{Cl}$ (III) in 96% yield. If more II is used, $[\text{Rh}(\text{SCN}_2\text{H}_4)_3\text{Cl}]_2$ (IV) and $[\text{Rh}(\text{SCN}_2\text{H}_4)_3\text{Cl}]_3$ (V) are also formed. If I and II are mixed in the proportions 1:1.4 in NH_4Cl soln., a little III ppts. at once and is filtered off. After 5-10 min. heating IV ppts. The mother liquor contains V, and addn. of NH_4NO_3 ppts. $[\text{Rh}(\text{SCN}_2\text{H}_4)_3\text{Cl}(\text{NO}_3)]_3$ (VI), which may also be obtained from III and II in the presence of excess NH_4Cl . IV forms a yellow oxalate and gives ppts. with NaClO and $(\text{NH}_4)_2\text{SO}_4$, while VI forms a white oxalate and gives no ppt. with the other reagents.
H. M. Leicester

ASD-56A METALLURGICAL LITERATURE CLASSIFICATION

VOLKOV, V. S.																										PROCESSING AND PROPERTIES INDEX																									
<p>The way of packing of synthetic rubber in the synthetic rubber plant No. 1. V. S. Volkov. <i>Sintet. Kautchuk</i> 1930, No. 2, 41. — The inside of wooden boxes was painted with a mixt. of talc or chalk and dextrin (1-2% of the talc); a paste was made of 1 kg. of this mixt. with 1-1.2 l. of water.</p> <p style="text-align: right;">A. Pestoff</p>																										30																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>SECTION STRONG</p> <p>SECTION WEAK ONLY USE</p> <p>SECTION ONE</p> <p>SECTION ONE ONLY USE</p>																																																			

VOLKOV, V.P., dotsent

Quantitative determination of nucleic acids in the blood of
healthy subjects and in patients with different dermatoses..
Vest.derm.i ven. 35 no.5:21-24 '62. (MIRA 15:5)

1. Iz kozhno-venerologicheskogo dispansernogo otdeleniya (zav. -
dotsent V.P. Volkov) Moskovskoy gorodskoy klinicheskoy bol'nitsy
No.23 imeni Medsantrud (glavnyy vrach A.N. Lobanova).
(NUCLEIC ACIDS) (SKIN--DISEASES)

VOLKOV, V. P.

L.N. KOGARKO; V.P. VOLKOV (USSR)

"Physico-chemical evolution of alkaline magmas in differentiated complex of
Loyortzero massif in connection with its rhythmical stratification.

Report presented at the Conference on Chemistry of the Earth's Crust, Moscow,
14-19 Mar 63.

VOLKOV, V.P.; POLEAKOV, A.I.; KARAHANOVA, M.I.

Characteristics of the mineral crystallization rock constituent
of the differentiated complex in the alkaline Lovozero Massive.
Annale geol geogr 17 no.1:79-88 Ja-Mr '63.

1. Institutul de geochimie si de chimie analitica "V.I. Vernadski"
Al Academiei de Stiinte a U.R.S.S., Moscova.

NOVITSKIY, K.Yu.; VOIKOV, V.P.; IL'INA, Yu.M.; YUR'YEV, Yu.K.

Furan series. Part 25: Oxidative cleavage of 2,5-disubstituted furans.
Zhur.ob.khim. 33 no.4:1145-1149 Ap '63. (MIRA 16:4)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Furan) (Oxidation)

SMIRNOVA, N. S.; VOLKOV-DUBROVIN, V. P.

"O stepeni svyazi pekotorykh morfologicheskikh i funktsional'nykh pokazateley v grunnye vzroslogonaseleniya (v svyazi s izucheniyem konstitutsii cheloveka)."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

REZNIK, I.Ye., kand. voyennykh nauk, polkovnik, voyennyy letchik pervogo klassa; VORONOV, V.M., kapitan, voyennyy shturman pervogo klassa; STEPANETS, V.S., kapitan, voyennyy shturman pervogo klassa; VOLKOV, V.S., mayor, voyennyy shturman pervogo klassa; PAVLOV, G.V., polkovnik, voyennyy letchik pervogo klassa, DANILKO, S., podpolkovnik, voyennyy shturman pervogo klassa

It is very important to improve the tactical training of flight personnel. Mor. sbor. 48 no.6:44-53 Je '65.

(MIRA 18:6)

SOV/89-6-3-3/29

11(6), 21(1)
AUTHORS:

Samoylov, A. G., Volkov, V. S.

TITLE:

Fuel Elements for Nuclear Reactors (Teplovydelyayushchiye
elementy yadernykh reaktorov)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 3, pp 261 - 276 (USSR)

ABSTRACT:

This article is a survey which has been compiled on the basis
of the western Geneva reports for 1958. The following reports
were used in the compilation of information in the individual
fields:

- 1) Design of fuel elements: Nr 48, 74, 209, 263, 264, 792, 1038, 1679,
1782, 1845, 2380, 2427.
- 2) Nuclear fuels: Nr 191, 421, 447, 785, 787, 791, 792, 1017, 1019,
1038, 1776, 1782, 1801, 1845, 1885, 1925, 2372, 2379.
- 3) Structural materials for fuel elements: Nr 44, 312, 314, 414,
450, 455, 1005, 1017, 1054, 1925, 2419.
- 4) Fuel element production technology: Nr 240, 788, 1555.
- 5) A ten page table contains a list of fuel elements. In the
compilation of this table the following articles were used:
Nr 74, 75, 135, 136, 208, 209, 210, 211, 246, 259, 263, 264, 312, 313, 314,
414, 416, 421, 423, 447, 450, 455, 609, 610, 785, 787, 791, 792, 1017,

Card 1/2

Fuel Elements for Nuclear Reactors

SOV/89-6-3-3/29

1038, 1134, 1319, 1464, 1523, 1555, 1584, 1630, 1673, 1679, 1782, 1801,
1850, 1885, 2274, 2372, 2380, 2419, 2427, 2462.

There is 1 table.

SUBMITTED: December 25, 1958

Card 2/2

26,2240
21,2500

26365
S/089/61/011/002/001/015
B102/B201

AUTHORS: Volkov, V. S., Luk'yanov, A. S., Chepkunov, V. V., Shevyakov,
V. P., Yamnikov, V. S.

TITLE: Use of fissile absorbers in nuclear reactors

PERIODICAL: Atomnaya energiya, v. 11, no. 2, 1961, 109-121

TEXT: The present article gives a survey of usefulness and purpose of the use of fissile absorbers in reactors. Introducing fissile absorbers into the core is one of the possible methods of compensating for the initial reactivity excess. For technological and chemical reasons, only few elements are eligible as absorbers of this kind: boron, hafnium, europium, gadolinium, samarium, cadmium, and mercury. Data on these fissile absorbers are compiled in a table taken from Ref. 1 (Nucl. Sci. and Engng., 4, No. 3, 357 (1958)). Experience and investigation results gained in the USA in various reactors are dealt with. Apart from reports made at the Second Geneva Atomic Conference (1958) (Papers nos. 455, 1017), the material concerned was taken exclusively from American publications: Nucl. Engng. 4, No. 34, 11 (1959), Nucleonics, 16, No. 1, 100, 102 (1958). The various

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Use of fissile absorbers in ...

technical and design problems involved in the use of fissile absorbers are now discussed. These problems include the exact dosing of the absorber, its resistance to corrosion, taking account of the change in mechanical properties of absorbers while in operation; use of boron leads to the formation of Li and He, which must also be taken into account; additional difficulties arise with fuel regeneration. The remaining problems are of a purely technical nature, such as a removal of heat produced in absorbers. In most cases, boron is used in the form of alloys or chemical compounds, dispersed in some materials. The properties of boron in stainless steels and boron-titanium alloy (1.75% by weight of B^{10}) have repeatedly been studied (Nucl. Sci. Engng. 4, No. 3, 386, 402, 415 (1958)). Irradiating an alloy containing boron (0.56% by weight of B^{10}) reduces its plasticity considerably: to half its value with an integral flux of $1.35 \cdot 10^{10}$ n/cm², and to one-fifth at $5.87 \cdot 10^{20}$ n/cm². The volume of boron-titanium alloys increases up to 4.3%, depending on burn-up and boron content. Similar conditions are found for boron-zirconium alloys (Nucl. Sci. and Engng. 6, no. 3, 1967 (1959); Reactor core materials, 2, no. 1, 26 (1959)). Neutron capture in the absorber plays the principal role in a theoretical treatment of reactors using fissile absorbers. For the case of only thermal neutrons

Card 2/3

Use of fissile absorbers in ...

26365
S/089/61/011/002/001/015
B102/B201

being absorbed, some relations are presented, which were taken from lectures by A. Radkowsky, J. Stewart, and P. Zweifel at the Second Geneva Atomic Conference (1958) [Abstracter's note: The numbers of the papers are not given.] Various fuel and absorber distributions in the core are discussed briefly. Finally, German investigations (Von Winkel et al. Atomenergie, 4, 3, 93 (1959)) are dealt with (Study of the linear radial distribution of an absorber, and its distribution according to a Bessel function). It is finally stated that the use of fissile absorbers still meets with certain difficulties which, however, can probably be overcome. There are 7 figures, 11 tables, and 18 references: 4 Soviet-bloc and 14 non-Soviet-bloc. The most important references to English-language publications are all mentioned in the abstract.

SUBMITTED: October 8, 1960

X

Card 3/3

SAMOYLOV, Andrey Grigor'yevich; KASHTANOV, Andrey Ivanovich;
VOLKOV, Vasilii Semenovich; PANASENKOVA, Ye.I., red.

[Dispersive fuel elements of nuclear reactors] Disper-
sionnye teplovydeliaiushchie elementy iadernykh reaktorov.
Moskva, Atomizdat, 1965. 342 p. (MIRA 19:1)

1. VOLOSHIN, L. N.; VOIKOV, V. S.
2. USSR (600)
4. Steam Boilers
7. Use and adjustment of Edge Moor boilers at the Kupyansk Sugar Factory, Sakh. prom., 27, No. 5, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

VOLKOV, V.S. (Sverdlovsk).

Oxygen therapy in cardiovascular diseases in workers of
industrial enterprises. Fel'd. 1 akush. 27 no.1:26-29 Ja '62.
(MIRA 15:3)

(MEDICINE, INDUSTRIAL)
(CARDIOVASCULAR SYSTEM—DISEASES)
(OXYGEN THERAPY)

VOLKOV, V.S.

Dynamics of ballistocardiographic data under the influence of
oxygen treatment in patients with hypertension and stenocardia.
Sov.med. 26 no.1:23-28 Ja '63. (MIRA 16:4)

1. Iz kardiologicheskoy gruppy usileniya (rukovoditel' -
zasluzhennyy deyatel' nauki prof. B.P.Kushelevskiy) pri
Sverdlovskom nauchno-issledovatel'skom institute kurortologii
i fizioterapii.

(BALLISTOCARDIOGRAPHY) (OXYGEN THERAPY)
(HYPERTENSION) (ANGINA PECTORIS)

VOLKOV, V.T.; DUDKO, A.A.; LEBEDEV, V.P.; LIPGART, B.K.; MIKHAYLOV, B.V.,
kand.tekhn.nauk; MIKHAYLOV, V.A., kand.tekhn.nauk; REKUNOV, V.F.;
SAVEL'YEV, N.P.; SOROKIN, V.V.; KHARIN, A.I. kand.tekhn.nauk;
Prinimali uchastiye: IVANOV, N.A., kand.tekhn.nauk;
INOKOVA, O.L.; GOMOZOVA, N.A., red.; NAUMOVA, G.D., tekhn.red.

[Mechanization and automation in the rock products industry]
Mekhanizatsiia i avtomatizatsiia v promyshlennosti nerudnykh
stroitel'nykh materialov. [By] V.T.Volkov i dr. Moskva,
Gosstroizdat, 1963. 353 p. (MIRA 17:3)

VOLKOV, V.S.

Functional test in the detection of prehypertensive states. Sov.
med. 28 no.8:3-3 Ag '65. (MIRA 18:9)

1. Kardiologicheskaya gruppa usiloniya (rukovoditel' - prof. B.P.
Kusholevskiy) pri mediko-sanitarnoy chasti Ural'skogo zavoda
tyazhelogo mashinostroyeniya imeni Ordzhonikidze i Sverdlovskiy
nauchno-issledovatel'skiy institut kurortologii i fizioterapii
(dir. - kand. med. nauk H.V.(rlov).

L 25666-66 ENT(m)/ETC(f)/EPF(n)-2/ENG(m)/EWP(t) ES/WW

ACC NR: AM6012204

Monograph

UR/ 3+/ 8+/

Samoylov, Andrey Grigdr'yevich; Kashtanov, Andrey Ivanovich; Volkoy, Vasiliiy Semenovich

19
Nuclear reactor dispersion fuel elements (Dispersionnyye teplovyye delyayushchiye elementy yadernykh reaktorov) Moscow, Atomizdat, 1965. 342 p. illus., biblio. 1650 copies printed.

TOPIC TAGS: nuclear reactor, reactor fuel element, dispersion fuel element

PURPOSE AND COVERAGE: The book is intended for physicists and reactor engineers specializing in the design of reactor fuel elements. It can also be useful for students of higher technical schools. The design of dispersion fuel elements for nuclear reactors is reviewed in detail and extensive references cited. The authors express their gratitude to Andrey Anatolievich Bochvar, member of the Academy of Sciences USSR, for his advice.

TABLE OF CONTENTS:

Foreword -- 3

1. Conception of dispersion-type fuel elements, their use and design-5

Card 1/2

UDC 621.039.54:541.18.053./054

L 25666-66

ACC NR: AM6012204

2. Materials for fuel elements -- 48
 3. Production of dispersion-type fuel elements -- 103
 4. Mechanical and physical properties of dispersion compounds - 204
 5. Radiation resistance of dispersion fuel elements -- 223
- Bibliography -- 307

SUB CODE: 18/ SUBM DATE: 15Oct65/ ORIG REF: 013/ OTH REF: 142

Card 2/2 *dda*

VOLKOV, V. V. , FLEROV, G. N., and PASYUK, A. S.

(Acad. Sci. USSR)

"Stripping Reaction Produced by the Accelerated Nitrogen Ions on Some Nuclei,"

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

VOLKOV, V.V.; VOROTNIKOV, P.Ye.; KOLTIPIN, Ye.A.; SIDOROV, N.I.; YAN'KOV, G.B.

Study of the D-D reaction in the 0,20 to 1,75 Mev deuteron energy
range. Atom energ. suppl. no.5:15-25 '57. (MIRA 11:2)
(Nuclear reactions)

VOLKOV, V.V.

AUTHORS: Volkov, V.V., Pasyuk, A.S., Flerov, G.N. 56-3-7/59

TITLE: Evaporation Reaction in the Interaction of Accelerated Nitrogen Ions N^{14} with the Nuclei of Some Elements. (Reaktsiya "sryva" pri vzaimodeystvii uskorennykh ionov azota N^{14} s yadrami nekotorykh elementov)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 3, pp. 595-601 (USSR)

ABSTRACT: N^{14} - ions are accelerated in the cyclotron up to ~ 100 MeV, after which they penetrate through Al., Ni, Cu, Ag, Cd, Sn- foils, on which occasion radioactive N^{13} was found. Measuring of angular distribution showed that N^{13} emerges only within a very narrow angular range. For Al $23^\circ \pm 8^\circ$ was measured as the most probable angle, where N^{14} - energy amounted to 67 MeV. The cross section for the evaporation reaction in the case of a N^{14} -energy of ~ 85 MeV amounted to 30 mb for Ni and 12 mb for Al. There are 5 figures and 2 Slavic references.

ASSOCIATION: AN USSR (Akademiya nauk SSSR)

SUBMITTED: March 19, 1957

AVAILABLE: Library of Congress.

Card 1/1

VOLKOV, V. V., MYASNIKOV, L. L., NAUMOV, A. I., STROGANOV, V. V. (NIRFI, Gor'kiy)

"Methods of Atom-Beam Radiospectroscopy".

report presented at the All-Union Conference on Statistical Radio
Physics, Gor'kiy, 13-18 October 1958. (Izv. vyssh uchev zaved-Radiotekh.,
vol. 2, No. 1, pp 121-127) COMPLETE card under SIFOROV, V. I.)

FLEROV, G. N., POLIKANOV, S. M., KARAMYAN, A. S., PASYUK, A. S., PARFANOVICH, D. M.,
TARAMTIN, N. I., KARNAUKHOV, V. A., DRUIN, V. A., VOLKOV, V. V., SEMCHINOVA, A. M.,
OGANESYAN, Yu. Ts., KHALIZEV, V. I. and KHLEBNIKOV, G. I.

"Experiments to Obtain Element 102." Dokl. Akad. SSSR, Vol. 120, No. 1, 73-5 (1958). In Russian.
Plutonium isotopes Pu^{241} and Pu^{242} were irradiated with oxygen ions, accelerated to 102 MeV. The nucleus so produced leaves the target, because of recoil, and is picked up in a collector. This can be moved, in a time of 4-5 sec. over to nuclear emulsions which are designed to register α -particles. Alpha-particles of energy greater than 8.5 MeV are detected. These could come from $Pu^{241,242}(o^{16},4-6n)102^{26,27}$. The total number of α -particles with an energy exceeding 8.5 MeV (those of energy less than 7 MeV could come from platinum contamination) was 18 in the irradiation of Pu^{241} and 8 in the case of Pu^{242} . These figures would give cross-sections for formation of element 102 of 2×10^{-30} and $5 \times 10^{-30} \text{ cm}^2$, respectively.

21(7) SOV/56-36-3-17/71
 AUTHORS: Volkov, V. V., Guseva, L. I., Pasyuk, A. S., Tarantin, N.I.,
 Filippova, K. V.

TITLE: The Production Cross Sections for Californium Isotopes by
 the Irradiation of U^{238} With Accelerated Carbon Ions
 (Secheniya obrazovaniya izotopov kaliforniya pri obluchenii
 U^{238} uskorennymi ionami ugleroda)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
 Vol 36, Nr 3, pp 762-765 (USSR)

ABSTRACT: In the course of the irradiation of heavy elements with multi-
 charged ions compound nuclei are formed, which decay again
 as the result of fission or neutron evaporation. Important
 conclusions may be drawn with respect to new transuranium
 synthesis from the ratio of the two decay processes in depen-
 dence on the excitation energy and the parameters of the com-
 pound nucleus. In the present paper results obtained concern-
 ing the energy dependence of the cross sections of the reactions
 $U^{238}(C^{12}, 4n - 5n)Cf^{246-245}$
 $U^{238}(C^{13}, 5n - 6n)Cf^{246-245}$ (cf. also references 1-3)
 are discussed. The $+4C^{12}$ and $+4C^{13}$ -ions were accelerated on

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SOV/56-36-3-17/71

The Production Cross Sections for Californium Isotopes by the Irradiation of U^{238} With Accelerated Carbon Ions

the 150 cm cyclotron of the AS USSR up to 78 and 84 Mev respectively (with an accuracy of 3%). Energy measurement was carried out by absorption in aluminum, measurement of the ion flux on the target was carried out by means of an integrator (0.2 - 0.3 μ a). The results obtained by these measurements are given in figures 1 and 2 in form of diagrams. Figure 3 shows the cross section of the reactions (C^{12} , 4n - 5n) and (C^{13} , 5n - 6n) referred to the total production cross section for the compound nucleus in dependence on excitation energy. Each of the curves shows a characteristic maximum. The shifting of the maximum of the reaction (C^{12} , 5n) towards that of the reaction (C^{13} , 5n) is assumed to be due to an inaccuracy of ion energy measurement. For the connection between the decay probabilities and the cross sections it holds that

$$\sigma_n = \sigma_t \left(\frac{W_n}{W_n + W_f} \right)^n$$

σ_n = total cross section of the neutron emission reaction in the case of a given energy. σ_f = cross section for the formation of a compound nucleus at the same energy. n = average number

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SOV/56-36-3-17/71

The Production Cross Sections for Californium Isotopes by the Irradiation of U^{238} With Accelerated Carbon Ions

of emitted neutrons. W_n = probability of neutron emission.

W_f = fission probability; (\bar{W} denotes the mean value)

\bar{W}_n/\bar{W}_f for californium is $\sim 1/4$ and varies only little in the

interval of the excitation energy of 35 - 55 Mev.

W_n/W_f for $Cf^{246}(4n - 5n)$ is $\sim 1/2$ and for $Cf^{246}(5n - 6n) \sim 1/3$.

The authors finally thank Professor G. N. Plerov for supervising work, and they also thank the cyclotron team under Yu. M. Pustovoyt and L. K. Tarasov for their collaboration in the chemical part of this work. There are 3 figures and 9 references, 5 of which are Soviet.

SUBMITTED: September 16, 1958

Card 3/3

FLEROV, G.N.; POLIKANOV, S.M.; KARAMYAN, A.S. [deceased]; PASYUK, A.S.;
PARFANOVICH, D.M.; TARANTIN, N.I.; KARNAUKHOV, V.A.; DRUIN, V.A.;
VOLKOV, V.V.; SEMCHINOVA, A.M.; OGANESYAN, Yu.TS.; KHALIZEV, V.I.;
KHLEBNIKOV, G.I.; MYASOYEDOV, B.F.; GAVRILOV, K.A.

Experiments to produce element No. 102. Zhur. eksp. i teor. fiz.
38 no.1:82-94 Jan '60. (MIRA 14:9)

1. Sotrudniki Ob"edinennogo instituta yadernykh issledovaniy (for
Polikanov, Oganessian, Gavrilov). 2. Sotrudnik Instituta geokhimii
i analiticheskoy khimii AN SSSR (for Myasoyedov).
(Transuranium elements)

FLEROV, G.N.; VOLKOV, V.V.; POMORSKIY, L.; TYS, Ya.

Production of N^{17} nuclei by irradiation of some elements with heavy ions. Zhur. eksp. i teor. fiz. 41 no.5:1365-1369 N '61.

(MIRA 14:12)

1. Ob'yedinennyy institut yadernykh issledovaniy.
2. Sotrudnik Tsentral yadernykh issledovaniy v Krakove, Pol'sha (for Pomorskiy).
3. Sotrudnik Instituta yadernykh issledovaniy v Varshave, Pol'sha (for Tys).

(Nitrogen--Isotopes)
(Ion beams)

VOLKOV, V.V.; POMORSKIY, L.; TYS, Ya.; FLEROV, G.N.; SARANTSEVA,
V.R., tekhn. red.

[Transfer reactions of $2n$ and $3n$ by irradiation of Al, Cu,
and Ta with N^{15} and N^{14} ions] Reaktsii peredachi $2n$ i $3n$ pri
obluchenii Al, Cu, Ta ionami N^{15} i N^{14} . Dubna, Ob"edinennyi
in-t yadernykh issl., 1962. 17 p. (MIRA 15:6)

1. Institut yadernoy fiziki, Krakov, Pol'sha (for Pomorskiy).
2. Institut yadernykh issledovaniy, Varshava, Pol'sha (for Tys).
(Nuclear reactions) (Neutrons) (Ions)

34655

S/056/62/042/002/050/055

B108/B138

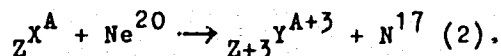
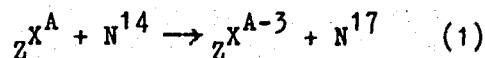
24.6500

AUTHORS: Volkov, V. V., Pomorskiy, L., Tys, Ya., Flerov, G. N.

TITLE: Observation of capture of three neutrons and stripping of three protons in the interaction of N^{14} and Ne^{20} ions with C, Al, Cu, and Ta nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 2, 1962, 635-637

TEXT: The authors studied nucleon transfer processes which occur in the interaction of heavy ions with nuclei without formation of a compound nucleus. The experiments are based on recording the lagging neutron activity of the N^{17} nuclei. Bombarding a target with N^{14} or Ne^{20} ions may lead to the reactions



However, the departure of free nucleons is not impossible. C, Al, Cu, and Ta targets were exposed to an ion beam of several microamperes. A detailed Card 1/3

Observation of capture of three ...

S/056/62/042/002/050/055
B108/B138

description of the experimental arrangement is given in ZhETF, 41, 1365, 1961 (G. N. Flerov et al.). The background caused by ions scattered from the cyclotron dees has to be considered only in the case of very low energies. Fig. 2 shows the yield in N^{17} (a), and the effective reaction cross section (b) for N^{14} ions. Results for Ne^{20} are qualitatively the same. The good agreement of the experimental values with data from publications (Ref. 11, see below) indicates that the observed reactions are nucleon transfer processes as described by Eqs. (1) and (2). There are 3 figures and 13 references: 3 Soviet and 10 non-Soviet. The four most recent references to English-language publications read as follows: J. A. McIntyre et al. Phys. Rev., 119, 1331, 1960; K. S. Toth. Phys. Rev., 121, 1190, 1961; Ref. 11: R. Kaufmann, R. Wolfgang, Phys. Rev. Lett., 3, 232, 1957; Phys. Rev., 121, 192, 1961; L. C. Northcliffe. Phys. Rev., 120, 1744, 1960.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). Institut yadernoy fiziki, Krakov, Pol'sha (Institute of Nuclear Physics, Cracow, Poland) (L. Pomorskiy). Institut yadernykh issledovaniy, Varshaya, Pol'sha (Institute of Nuclear Research, Warsaw, Poland) (Ya. Tys)

Card 2/3

Observation of capture of three ...

S/056/62/042/002/050/055
B108/B138

SUBMITTED: December 9, 1961

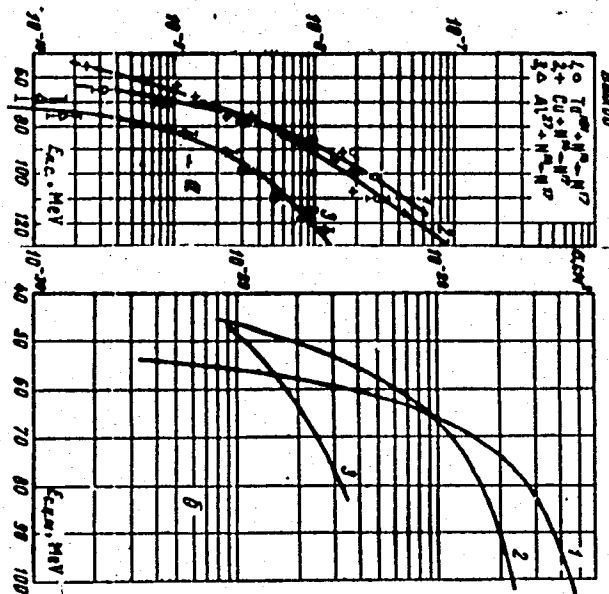


Fig. 2

Card 3/3

VOLKOV, V.V.; POMORSKIY, L.; TYS, Ya.; FLEROV, G.N.

Transfer reactions of $2n$ and $3n$ by bombardment of Al, Cu, and Ta
with N^{15} and N^{14} ions. Zhur. eksp. i teor. fiz. 43 no.3:865-872 '62.
(MIRA 15:10)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions) (~~Cellulose~~ (Nuclear physics)) (Ions)

VOLKOV, V.V.; POMORSKIY, L.; TYS, Ya.; FLEROV, G.N.

Observation of a reaction involving the pickup of three neutrons and another involving the stripping of three protons in the interaction of N^{14} and Ne^{20} ions and C, Al, Cu, and Ta nuclei. Zhur. eksp. i teor. fiz. 42 no.2:635-637 F '62. (MIRA 15:2)

1. Obyedinenyy institut yadernykh issledovaniy. 2. Institut yadernoy fiziki, Krakov, Pol'sha (for Pomorskiy). 3. Institut yadernykh issledovaniy, Varshava, Pol'sha (for Tys).
(Nuclear reactions)(Protons)(Neutrons)

S/056/62/043/003/021/063
B102/B104

AUTHORS: Volkov, V. V., Pomorskiy, L., Tys, Ya., Flerov, G. N.

TITLE: $2n$ and $3n$ transfer reaction in the bombardment of Al, Cu and Ta by N^{15} and N^{14} ions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v.43, no. 3(9), 1962, 865-872

TEXT: The authors studied the transfer of two and three neutrons from the target nuclei (Al, Cu, Ta) to the bombarding ions. The experiments were carried out at the cyclotron of the Laboratoriya yadernykh reaktsii OIYaI (Laboratory of Nuclear Reactions of the OIYaI) which was set in pulsed operation. The bombardment period was 30 sec, since the N^{17} half-life is 4.15 sec. The ion energies were between ~ 50 and 140 Mev. The time dependence of the N^{17} neutron activity and the dependence of the N^{17} yield on the energy of the bombarding ions was measured with an apparatus described in detail in ZhETF, 41, 1365, 1961. The results obtained for the reaction cross sections were compared with those of transfer reactions of one neutron from the bombarding particle to the target (ZhETF; 33, 595, 1957;

Card 1/2

2n and 3n transfer reaction in...

S/056/62/043/003/021/063
B102/B104

Phys. Rev. 119, 1331, 1960). The cross sections were found to increase when changing over Al to Cu and to Ta. The same sequence was observed for the Q-value of the reaction and for the height of the Coulomb barrier in the c.m.s. The fact that the 2n cross section is higher than the 3n cross section by about one order of magnitude is attributed to a reduction in probability. There are 8 figures and 1 table.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: April 23, 1962

Card 2/2

BRANDSHTET, I.; VOLKOV, V.V.; YERMAKOV, V.A.; ZVAROVA, T.S.;
KIRZHIVANEK, M.; MALY, Ya.; SH KHUN-GUY [Su Hung-kuei]

Study of the products of reactions of heavy elements with
multicharge ions. Part 2: Yield of some isotopes of
californium and fermium during the irradiation of thorium
and uranium by O^{16} , O^{18} , and Ne^{22} ions. Radiokhimiia 5
no. 6:706-711 '63. (MIRA 17:7)

VOLKOV, V.V.; POMORSKIY, L.; TYS, Ya. [Tys, J.]; VIL'CHINSKIY, Ya.
[Wilczynski, J.]

Two-neutron transfer reaction in the bombardment of $Zr^{90, 92, 94}$
isotopes by N^{15} ions. Zhur. eksp. i teor. fiz. 45 no.4:897-
903 0 '63. (MIRA 16:11)

1. Ob'yedinennyy institut yadernykh issledovaniy. 2. Sotrudnik
Instituta yadernoy fiziki, Krakov, Pol'sha (for Pomorskiy). 3.
Sotrudnik instituta yadernykh issledovaniy, Varshava, Pol'sha
(for Tys). 4. Sotrudnik Yagellonskogo universiteta, Krakov,
Pol'sha (for Vil'chinskiy).

L 00037-66 EWT(m) DIAAP

ACCESSION NR: AP5020306

UR/0186/65/007/004/0453/0461

829.379.4 : 846.799.5.08.241 : 846.799.5.08.242 + 846.799.5.08.243

AUTHOR: Dedov, V. B.; Volkov, V. V.; Gvozdev, B. A.; Yermakov, V. A.; Lebedev, I. A.
Razbitnoy, V. M.; Trukhlyayev, P. S.; Chuburkov, Yu. T.; Yakovlev, G. N.

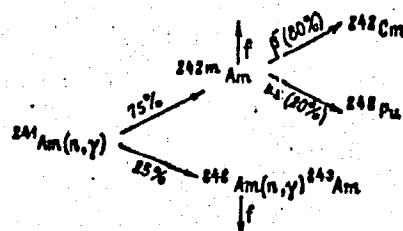
TITLE: Production of Pu-242 and Cm-242 from neutron-irradiated Am-241

79, 25
E

SOURCE: Radiokhimiya, v. 7, no. 4, 1965, 453-461

TOPIC TAGS: plutonium, curium, americium, extraction, neutron irradiation

ABSTRACT: Irradiation of Am-242 with thermal neutrons produces Pu²⁴², Cm²⁴² and Am²⁴³ which are of great interest in a number of physical and radiochemical investigations. The synthesis scheme is as follows:



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L 00037-66

ACCESSION NR: AP5020306

The thermal neutron cross section of Am^{241} is 900 barn, thus even upon short irradiation with a high density thermal-neutron beam a significant amount of the above isotopes may be produced. It can be seen from the above process that the yield of fission products is small since they are produced mainly during fission of Am^{242} . This facilitates the chemical processing of irradiated substances. Production of Pu^{242} by this process requires much less time than the method which uses Pu^{239} as starting material. The authors describe the chemical separation of Pu^{242} , Cm^{242} and Am^{243} from irradiated Am^{241} . The scheme for the chemical processing was selected to be such that it would produce rapid separation of the products. The main separation steps involved chromatographic and chemical extraction methods. Chromatographic separation was made extremely difficult by high α -activity due to the presence of Cm^{242} . Chemical processing was carried out in a shielded area on a special stand with remote control of all operations. The article indicates some properties of curium oxalate, potassium curium sulfate, curium hydroxide and curium carbonate. Orig. art. has: 5 tables and 3 figures.

ASSOCIATION: none

SUBMITTED: 18Apr64

ENCL: 00

SUB CODE: GC, NP

NO REF SOV: 004

OTHER: 005

Card 2/2 *JH*

DEDOV, V.B.; VOIKOV, V.V.; GVOZDEV, B.A.; YERMAKOV, V.A.; LEBEDEV, I.A.;
RAZBITNOY, V.M.; TRUKHLYAYEV, P.S.; CHUBURKOV, Yu.T.; YAKOVLEV, G.N.

Production of Pu^{242} and Cm^{242} from neutron irradiated
 Am^{241} . Radiokhimiia 7 no.4:453-461 '65. (MIRA 18:8)

VOLKOV, V.V.

Possible errors in evaluating the degree of malignancy of
tumors by radiophosphorus P^{32} . Dokl. AN SSSR 157 no.1:
183-186 JI '64 (MIRA 17:8)

1. Voenno-meditsinskaya akademiya im. S.M. Kirova. Predstav-
leno akademikom N.N. Anichkovym.

VOLKOV, V.V.; KHRAPKOV, V.A.

Photogrammetric bridging on the SPP-2 stereoprojector in case of
large-scale surveying. Geod. i kart. no.11:23-26 N '64.

(MIRA 18:2)

SOV/156-58-2-43/48

AUTHORS: Butt, Yu. M., Rashkovich, L. N., Volkov, V. V.

TITLE: Interaction Between Magnesium Carbonate and Calcium Silicates and Silica in Hydrothermal Processing (Vzaimodeystviye karbonata magniya s silikatami kal'tsiya i kremnezemom pri gidrotermal'noy obrabotke)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 2, pp. 373-376 (USSR)

ABSTRACT: The raw material basis of the production of lime-sand products could be considerably extended if an interaction between un-burnt carbonate rocks and silica could be brought about. By the addition of such rocks to portland cement (with or without sand) the valuable binding agent could be saved. Among the natural carbonates magnesium carbonate and dolomite are suited best for this purpose. In the first series of tests the interaction of magnesium carbonate with sand and lime in connection with hydrothermal processing was investigated. It can be computed from table 1 that a change has taken place in the composition of the used magnesite as a result of the mentioned processing: from $MgO \cdot 0,85CO_2 \cdot 0,39H_2O$ to $MgO \cdot 0,76CO_2 \cdot 0,36H_2O$. In this connection

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S07/156-58-2-43/48

Interaction Between Magnesium Carbonate and Calcium Silicates and Silica in Hydrothermal Processing

approximately 10% of the total amount of CO_2 contained in the magnesite was precipitated. The content of bound water remained practically unchanged. Silica considerably accelerates the decomposition of magnesite by the formation of magnesium hydrosilicate. It can be computed from the same table that approximately 70% of MgO passed from magnesite into hydrosilicate. These results are confirmed by the thermogram (Fig 1, Curve 5). In the case of hydrothermal processing a decarbonization of magnesite takes place. The presence of sand and lime favours the MgCO_3 decomposition. In this connection magnesium and calcium hydrosilicates are formed. In the second series of tests the interaction between magnesite and calcium silicates in hydrothermal processing was investigated. Di- and tricalcium silicate were synthesized. As can be seen from table 2 a 70% addition of magnesite to alite hardly reduces its strength. Greatest strength was observed after an addition of 30% of MgCO_3 . An addition of 50% of MgCO_3 to belite reduces its strength only by 20%. An addition of dolomite to alite and belite reduces their

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SOV/196-56-2-45/48

Interaction Between Magnesium Carbonate and Calcium Silicates and Silica in Hydrothermal Processing

strength, however, to a much smaller degree than would correspond to the percentage added. As is known hydrothermal processing of a mixture of alite with 25% of sand leads to the formation of a considerable quantity of alpha hydrate of di-calcium silicate $[C_2SH(A)]$ - a basic compound which forms in hydrothermally processed portland cement. The authors produced this compound (Curve 5, Fig 2). It can be concluded from the results that in the case of an autoclave processing of lime-sand products unburnt magnesite must be used instead of lime. It is expedient to replace a part of the crushed sand by magnesite or dolomite in the production of autoclave products on a sand-cement-basis. There are 2 figures and 2 tables.

ASSOCIATION: Kafedra tekhnologii tsementa Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair for Cement Technology of the Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

Card 343

5(1)

AUTHORS:

Butt, Yu. M., Rashkovich, L. N.
Volkov, V. V.

SOV/153-58-3-22/10

TITLE:

Solidification of the Mineral Mixture of Portland Cement -
Clinker in Hydrothermal Treatment (Tverdeniye smeley
mineralov portlandtsementnogo klinkera pri gidrotermal'noy
obrabotke)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
khimicheskaya tekhnologiya, 1958, Nr 3, pp 130 - 135 (USSR)

ABSTRACT:

The increasing production of products of sand-portland cement
hardened in the autoclave in the USSR required a profound
study of the reactions taking place within this process.
First investigations of the interaction in the course of the
hydrothermal hardening in three groups of minerals should
be separated: 1.-Calcium silicates with calcium aluminates,
-alumo ferrites and -ferrites; 2.-Clinker mineral silicates
with silica; 3.-Melt minerals: calcium aluminates, -alumo
ferrites and -ferrites with silica. (Abbreviations: SiO_2 = S;
 Fe_2O_3 = F; Al_2O_3 = A; CaO = C; H_2O = H.). In the present
communication the investigation results of the hydrothermal

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Solidification of the Mineral Mixture of Portland
Cement - Clinker in Hydrothermal Treatment

SOV/153-58-3-22/30

interaction between C_3S and $\beta-C_2S$ on the one hand, and C_3A , C_4AF and C_2F on the other are mentioned. Other systems are known so well that the formation of certain compounds can be predicted. Therefore no other experiments were carried out. Based on the results obtained the authors drew the following conclusions: 1.-The hydrothermal treatment of mixtures containing calcium silicates and C_3A leads to the formation of a silica-containing calcium hydro-aluminate C_3AS_xaq . 2.- In the hydrothermal treatment of mixtures containing calcium silicates and C_4AF apparently a silica-containing hydro-ferrite (of the type (C_3FS_xaq) is formed as well as a silica-containing hydro-alumoferrite (of the type $C_3(A, F)S_xaq$). The formation of the former seems to be more probable. 3.- Dicalcium ferrite is decomposed to Fe_2O_3 and $Ca(OH)_2$ in the hydrothermal treatment. The interaction of C_2F

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with silicates takes place under the formation of minute amounts of silica-containing hydroferrite. 4.-The calcium silicates slow down the hydration of C_4AF and C_2F under the conditions of hydrothermal treatment. There are 4 figures and 4 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut imeni D. I. Mendeleeva - (Moscow Institute of Chemical Technology imeni D. I. Mendeleev); Kafedra tekhnologii vyazhushchikh veshchestv (Chair of the Technology of Binding Agents)

SUBMITTED: October 14, 1957

Card 3/3

VOLKOV, V.V., inzh.; KORCHITS, V.K., inzh.

Quarries and supply of rock products for the construction. Energ.-
stroitel. no.23:124-130 '61. (MIRA 15:1)

1. Zamestitel' nachal'nika stroitel'stva Kremenchugskoy gidroelek-
trostantsii po promyshlennym predpriyatiyam (for Volkov).
(Quarries and quarrying)
(Kremenchug Hydroelectric Power Station--Design and construction)

55209-65 INT (1)/EIA (H) Feb UR/0286/65/000/009/0035/0035

ACCESSION NR: AP5045245

AUTHORS: Volkov, Y. Y.; Kostenko, M. A.; Volkova, L. K.

TITLE: A device for registering electrical pulses. Class 21, No. 170547 10
25

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 35

TOPIC TAGS: pulse storage, voltage amplifier

ABSTRACT: This Author Certificate presents a device for registering electrical pulses passing in a random order through several circuits. To simplify the circuit by providing a conversion for the number of pulses entering the input into a voltage the device contains one capacitor at each input. Each capacitor is connected through a diode to a common storage capacitor with a discharge circuit (see Fig. 1 or the Enclosure). The voltage from the capacitor is supplied to an amplifier input. The amplifier output is connected through a diode to the common lead of the input capacitors for their recharging. Orig. art. has 1 figure.

ASSOCIATION: none

SUBMITTED: 07 Jan 65

ENC: 01 SUB CODE: EC

OTHER: 000

NO REF SOV: 000

55209-65

ACCESSION NR: A-58152/6

ENCLOSURE: 01



Discharge circuit

VOLKOV, V.V.

Healing of a duodenal stump closed with the aid of a posterior flap. Uch. zap. Stavr. gos. med. inst. 12: 314-315 '63.

Closure of the duodenal stump following surgery for ulcers in its lower portion. Ibid.: 316-317 (MIRA 17:9)

1. Iz khirurgicheskogo otdeleniya Kislovodskoy gorodskoy bol'nitsy (zav. otdeleniyem V.V. Volkov). Nauchnyy rukovoditel' prof. I.I. Khozhainov.

CA
VOLKOV, V. V.

Effect of antireticular serum on immunity to experimental coli bacillosis. V. V. Volkov, *J. med. Ukraine* 9, 1229-40 (in Russian, 1940; in French, 1941) (1940). - Injection of small doses of antireticular serum (obtained from sheep injected with reticulo-endothelial tissue) increases the mortality rate to expil. *Escherichia coli* infection in sheep. A prolonged hyperleucocytosis is always found when small doses are given, a very short one with large doses. When stimulating doses of the serum are given during immunization of sheep against this infection, a much greater production of agglutinins results. The serum produces greater fixation of India ink by tissues. I. Pinchack

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

11C7

VOLKOV, V. V.

42740. POLYAK, B. L., VOLKOV, V. V., i KOGAN, Ye. S. O Deystvi1 Novogo Sovetskogo Preparata Furamona Na Zdorovyy I Glaukomatoznyy Glaz. Oftalmol. Zhurnal, 1948, No 3, s. 123-32.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

POLYAK, B.L., Col Med Serv.; VOLKOV, V.V., Major Med Serv;

"Furamon and its Therapeutic Significance in Glaucoma (Experimental-Clinical Research", Vest. Oftalmologii, No 2, Mar-Apr '49.

Chair of Ophtalmalogy; Mil Med Acad im. Kirov

POLYAK, B. L., VOLKOV, V. V.

Glaucoma

"Benzamon", a new Soviet miotic preparation; its therapeutic significance in glaucoma.
Vest. oft. 21, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1952 ~~1951~~. Unclassified.